

[Process and apparatus for the removal of heavy metals, particularly Arsenic, from water]

Abstract of Disclosure

This invention describes a process and apparatus for the removal of heavy metals, particularly arsenic, from water. The process consists in promoting the circulation of the water to be treated in an electrolytic cell equipped with iron, or iron alloy, electrodes, while the contemporary insufflation into the cell of a gas, partially or totally composed of oxygen. In this way the iron of the anode electrodes dissolves as iron hydroxide. The ferrous hydroxide thus generated, under the action of the oxygen contained in the insufflated gas, is converted to ferric hydroxide, which, through a complex mechanism, adsorbs and forms insoluble complexes with the arsenic ions. By this process both forms of arsenic, As(III) and As(V), are equally removed. The treated water is further processed by conventional clarifying and filtering processes.

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Figures

Figure 14-17